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THE ENCOURAGEMENT OF CREATIVITY BY PRESENT AND
FUTURE EDUCATORS

BY

 SISTER CATHERINE KROETCH

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

OCTOBER 1968

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read,
and recommend to the Faculty of Graduate Studies for
acceptance, a thesis entitled "The Encouragement of
Creativity by Present and Future Educators", submitted
by Sister Catherine Kroetch in partial fulfilment of
the requirements for the Degree of Master of Education.

ABSTRACT

A personality quality or behaviour will not be encouraged in schools unless that quality or behavior is valued by both teachers and school counsellors. While several studies have investigated teacher attitudes in respect to creative behavior, to date no investigation has been made of the relationship between training, type of program, sex, type of employment or experience and teacher attitudes toward behavior characteristic of creative personalities. There is also no data to support the fact that school counsellors, whom one might expect to defend and foster the value of individuality, are in any way more appreciative of those behaviors associated with creativity than other members of the educational "establishment."

Specifically, the present study has focused on the following questions:

- (1) What is the relationship, if any, between increased training, the sex of the teacher, and the type of educational program the teacher has experienced and teacher attitudes toward those behaviors associated with creativity?
- (2) Does experience in teaching result in a different set of attitudes when contrasted with those manifested by student teachers?

- (3) What are the attitudes of persons engaged primarily in school counselling, of teachers at various grade levels and of administrators toward behaviors characteristic of creative persons?

Edmonton Separate School teachers holding a Bachelor of Education degree and with varying years of experience, the counsellors of both Separate and Public School systems, and first and fourth year Education students at the University of Alberta completed the Ideal Pupil Checklist, rating the behaviors which they believe are to be discouraged or encouraged. The findings show that:

- (1) The sex of the teacher and the type of program that the teacher has followed, i.e. elementary or secondary, have little effect on teachers' attitudes toward those behaviors associated with creative personalities. Furthermore, students in their fourth year of university training appear more encouraging of the behavior characteristics of original persons than first year students or experienced teachers.
- (2) Increased experience in teaching does not appear to result in any notable change in attitude toward traits denoting creativity.
- (3) School counsellors are more encouraging of behaviors characteristic of innovative persons

than are administrators or teachers,
regardless of the grade level at which
they hold positions.

ACKNOWLEDGEMENTS

The writer wishes to thank her supervisor, Dr. P. C. Sartoris and members of her committee, Dr. G. M. Farmer and Dr. G. L. Lefrancois for their interest, guidance, and constructive suggestions during the writing of the study.

The writer also wishes to express her appreciation to the counsellors and teachers of the Edmonton Separate Schools, the counsellors of the Edmonton Public Schools, and the Education students at the University of Alberta who so willingly supplied the data for this study.

Finally, the writer is indebted to her parents and family for their constant interest and encouragement, and to the sisters of her religious community whose assistance and support contributed greatly to the completion of this project.

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CHAPTER I

INTRODUCTION

Educators, research workers, industrial and governmental employers, as well as all who are alert to the patterns of change and the needs and challenges of contemporary and future society, are concerned that youth be provided with the necessary knowledge, skills, and abilities to cope efficiently with a complex society of constant change and stringent demands.

Every vocational field is seeking creative thinkers and innovators. According to Guilford (1962) society wants creative individuals, men with good judgment, planning ability, and inspiring vision. Torrance (1965b) develops this further, stating that "no longer is it easy to apply past truths to the problems of the present and the future ... today's world calls for new approaches to experience" (p. 12). He insists that young people can best be helped to fit into the working-world not by imparting to them as many facts and skills as possible, but by instilling in them those skills and attitudes which will enable them to continue to learn for the rest of their lives.

Contemporary social-political-economic problems require creative problem-solvers and creative initiators. Osborn (1953) comments that the newest and most urgent problems of our day are not those dealing with the improve-

ment of things but those involving the eradication of social problems. He states that,

... to arrive at new and good ideas which might solve the world's people-problems, there is no conscious creative effort at all comparable to what scientific research is doing to better the products we use (p. 5).

Our society is failing in the application of original thinking to the needs and problems facing the world today. The crucial task is to develop genuinely creative problem-solvers who will be able to discover better ways of resolving the conflicts and difficulties in human relations which have beset man throughout his history. The application of worn formulae will no longer solve today's problems which are vastly more complex than ever before.

Creative persons are needed in our society to ensure the growth and progress of our culture. Some observers, notably Bloom et al. (1965), are fearful that home and school may not even be preparing youth for survival in the newly emerging culture. These writers state that in the light of the vast changes taking place, we are all culturally deprived. This cultural deprivation, they hold, is above all characterized by a lack of creative thinking and creative behavior by the members of society in general, due to insufficient motivation and experience in creative acts. In general, society resists change, nonconformity, risk-taking, and flexible structuring of daily living.

The consequences of "cultural deprivation" are costly in terms of mental health. Torrance (1963) states that "there is little doubt but that the stifling of creativity cuts at the very roots of satisfaction in living and ultimately creates overwhelming tension and breakdown" (p. 2). Barron (1963) and Ojemann (1961) also maintain that creativity and mental health are compatibly and mutually reinforcing.

While it is clear that society urgently needs more original thinkers and innovators, it is also evident that insufficient attention has been given to the fostering of creative thinking and behavior. Taylor (1964) holds that our education prepares persons only for success and not for coping with life's problems, frustrations, and failures. The need to stress the fostering of creative activity in all educational institutions is pointed out by Harding (1963). He maintains that the university especially should provide the atmosphere for students to freely work together with ideas, and that "creativity, originality, and inventiveness are prime requisites for the crucial task of training the mind" (p. 5).

Guilford (1965) comments on the need to emphasize the development of creative talent in educational institutions and poses some challenging questions for educators. He asks:

Why is creative productivity a relatively infrequent phenomenon? Why is there so little apparent correlation between education and creative productiveness? Why do we not produce a larger number of creative geniuses than we do under supposedly enlightened, modern educational practices? How can we promote the development of creative personalities (p. 153)?

Recently some research has been done to find answers to these questions and others. The first difficulty facing investigators in this field is that of defining creativity. Creativity is defined by English and English (1958) as the "ability to find new solutions to a problem or new modes of artistic expression" (p. 129). Torrance (1962) a well-known researcher in this area, defines the creative personality as having "facility in forming new ideas or hypotheses, testing these ideas or hypotheses and communicating the results" (p. 16). Such a person responds constructively to existing or new situations rather than merely adapting to them. One panel of experts in the creativity field of study, whom Torrance had describe the "ideal pupil" by means of his Ideal Pupil Checklist (1965), further characterized the creative person as being courageous in convictions, curious, independent in judgment, independent in thinking, able to become preoccupied with tasks, intuitive, visionary, unwilling to accept say-so, willing to take risks, and persistent.

The problem of how to release latent creative talent

and promote its development is currently an area of much concern and interest to researchers. It has been found that an environment that stresses evaluation hinders the development of originality. Tumin (1954) and Eiseman (1964) state that nothing is so hostile to the maximum development of creativity as the competitive grading system which prevails in schools. Since grading is a threat which elicits defensiveness and the denying to awareness of some areas of experience, Rogers (1954) insists that external evaluation should be absent if creativity is to flourish. These views are supported by Handlin (1962) who holds that current evaluation systems encourage memorization, accuracy, neatness and cautiousness, but rarely ask the student to use his ability to independently discover answers or solutions to new problems.

Pressures toward conformity are viewed by some investigators as a major inhibitor of creative functioning (Andrews, 1963; Carpenter, 1962; Lewis, 1965; Wodtke, 1965). Cattell (1959) observes from his study of research scientists that creativity and social introversion are significantly correlated, yet our educational system seems rather intolerant of the introverted student who is often viewed as maladjusted. There is a noticeable tendency to reward the student who is, instead, outgoing and social in nature. Thus, the difficulties facing the more introverted type of person in expressing his creative potential are increased. Tumin (1954)

believes that the overemphasis on conformity apparent in our schools is due to the fact that teachers count heavily on the habit of conformity as their basic instrument of discipline and social control. Wodtke (1965) found in his study of high and low controlling teachers that a high controlling teacher discourages self-initiated pupil talk, verbal flexibility and verbal creativity. From the student's point of view, Mearns (1958) has found that it is only when a student is convinced that the teacher is not bent on re-making him, that he can behave creatively. At the same time, research has demonstrated that the more creative person is likely to manifest behavioral traits such as rebelliousness, disorder and exhibitionism which often can incur the social disapproval of adults, especially of teachers who value conformity and discipline (Barron, 1962; Dabrowski, 1964; Mackinnon, 1962; Maslow, 1958). Stein (1953) and Pye (1962) feel strongly that this disapproving reaction may seriously inhibit the growth of creativity.

It is evident, then, that one very important condition for the development of creative qualities in young people is an unconditional psychological acceptance from adults, free from undue pressures toward conformity, free from constant evaluation and criticism and, above all, free from hostility. Rogers (1962) terms this psychological acceptance, an atmosphere of "psychological

safety" in which individuals are accepted and valued as they are with their unique qualities. Day (1966) also stresses the necessity of this condition, stating that "before significant numbers can be expected to break with tradition they must be assured that they will receive the support of the teacher" (p. 331). The learner must be assured that his tastes will be respected, that he is free to explore and will not be morally sanctioned for shaking the cultural setting, before he will dare to reach out beyond the existing structures and engage in original activity. This view is amply supported by the study of creativity in high school made by Getzels and Jackson (1962), and by other writers (Carpenter, 1962; Cooper, 1964; Drews, 1963; Drews and Montgomery, 1964; Eisner, 1965; Hendrickson and Torrance, 1961; Lasswell, 1963).

Encouragement and reward, which are aspects of psychological acceptance, are particularly important in the fostering of creativity. Barkan (1960) found that if the inventions and art work of children were examined with interest, the children were more original than if their work was ignored or rejected. Similarly, Mearns (1958) discovered that the teacher's acceptance of every crude product of creativity stimulated students to further efforts in producing with originality. Buhl (1961) found that engineers termed by his standards as "creative", had been encouraged to discuss ideas with parents and friends

and had been urged to try out their original ideas and pursue independent interests. Pepinsky (1959) also points out the need for patrons or sponsors who would support and encourage the innovative person whose ideas are often ignored, rejected or unnoticed, until he can bring them to the state of production. Rewarding original thinking is also seen by Rubin (1963) and Strang (1959) as a powerful motivation for learning and as such it is seen as a practice to be encouraged in teachers.

A personality quality or behavior will not be encouraged, however, unless that quality or behavior is genuinely valued by teachers. Torrance (1963) deplores the fact that there is a lack of appreciation of the creative process evidenced in the stated goals of teachers at all levels of education, which shows itself in the methods of teaching, tests which stress convergent thinking, and the constant evaluative procedures which are utilized supposedly to identify the talented student. He has found that "creative growth" has rarely been recognized, let alone valued, as an objective of secondary education. In a study (1964) wherein teachers were asked to select a course or unit and list its three most important objectives, only 1.7 per cent listed a divergent or creative thinking type in which the student is stimulated to search for an answer or perhaps reject an old solution. If teachers do not consider the development of questioning attitudes,

divergent thinking, and originality in their students as important objectives, it is unlikely that creativity will be considered seriously enough to be consciously encouraged within classroom practice. In fact, Myers (1961) has found that a group of Minnesota teachers, when asked to apply in their classroom five principles for rewarding creative thinking were, on the whole, unable to do so. An analysis of the teachers' reports showed that they can encourage creative thinking only if their own values support creativeness as a basic goal of education. Ten characteristics were found among the teachers who were not able to apply or support one or more of the principles:

Collectively they were authoritarian, defensive, dominated by time, insensitive to their pupils' intellectual and emotional needs, lacking in energy, preoccupied with their information-giving functions, intellectually inert, disinterested in promoting initiative and self-reliance in their pupils, preoccupied with disciplinary matters, and unwilling to give much of themselves in the teacher-learning compact (p. 159).

It is clear, then, that teachers will encourage divergent thinking and other characteristics of creative personalities only if they value these traits. Torrance (1965b) states that the process of encouraging or discouraging certain characteristics is "accomplished in terms of what teachers regard as ideal behavior or the kind of person they would like to see a child become" (p. 221). Consequently, Torrance has made several studies to find out

what teachers do consider to be ideal behavior and the kinds of persons teachers would like to see their pupils become.

Torrance's first study (1964) was designed to discover what kind of persons secondary teachers wish their students to become. For this study he devised the "Ideal Pupil Checklist", an instrument drawn up through an examination of fifty studies which compared personality characteristics of outstandingly creative individuals in a particular field of achievement with less productive and creative individuals in the same area. The checklist was completed by three hundred American teachers, from each of the intermediate, junior high, and senior high school levels. The teachers rated the personality traits to be encouraged and those to be discouraged. Their index of desirability so obtained was then compared to a set of ratings of the "ideal creative personality" made by a panel of expert judges. The chart on the following page lists the ten characteristics of the ideal personality valued most highly by the panel of experts, the junior high school teachers, and the senior high school teachers.

The composite ratings of the junior high school teachers correlated .36 and those of the senior high school teachers, .45 with the model of the ideal creative personality based on the expert's rating. It would seem from this study, that junior and senior high school

Expert Judges	Junior High	Senior High
Courageous in convictions	Considerate of others	Independent in thinking
Curious	Independent in thinking	Considerate of others
Independent in thinking	Courteous	Sincere
Independent in judgment	Industrious	Sense of humor
Willingness to take risks	Determination	Curious
Intuitive	Sense of humor	Self-confident
Absorbed in tasks	Sincere	Determination
Persistent	Does work on time	Courteous
Unwillingness to accept things on mere say-so	Self-starter	Self-starter
Visionary	Curious	Desires to excel

teachers are primarily concerned that their students develop the "social graces" such as courtesy, consideration, sincerity and promptness, and seem to place lesser emphasis on such qualities as courage in convictions, independence in judgment, willingness to take risks, intuition, absorbedness in work, persistence, unwillingness to accept things on mere say-so, all of which have been found to be qualities associated with creative personalities.

Torrance infers that teachers in high school are more concerned about "appearing to be" than "actually being".

A second study was made by Torrance (1965) to discover possible cultural differences in the evaluation of creative characteristics. The "Ideal Pupil Checklist" was this time administered to groups of teachers in New York, Germany, Greece, India and the Philippines. The ratings on the completed checklists were converted to the standard Q-sort distribution and compared with the Q-sort distribution derived from the ratings of a panel of experts on the creative personality. The results of the comparisons suggest that all five cultures may be unduly punishing the good guesser, the child who is courageous in his convictions, the emotionally sensitive individual, the intuitive thinker, the individual who regresses occasionally and plays or acts childlike, the visionary individual, and the children who are unwilling to accept things on mere say-so without evidence. All of them may be giving undue rewards for being courteous, doing work on time, being obedient, being popular and well-liked, and being willing to accept the judgments of authorities.

In a similar vein, Getzels and Jackson (1963) found that teachers preferred students with high I.Q.'s but less outstanding scores on measures of creative thinking to those with outstanding creativity scores but with less

outstanding intelligence quotients. Individuals in the high I.Q. group tend to converge upon stereotyped meanings, to perceive personal success by conventional standards, to move toward the model provided by teachers, to seek out careers that conform to what is expected of them. The high creatives, by contrast, tend to diverge from stereotyped meanings, to produce original fantasies, to perceive personal success by unconventional standards and to seek out careers that do not conform to what is expected of them. The first type of student, unfortunately, receives far greater acceptance in most of our social institutions.

The above studies seem to indicate that part of the young people's socialization process conditions against acceptance of the new, the unusual, the untried within the school. It is apparent that developing one's creative qualities inevitably makes a person different and being different almost always brings some disapproval. Such being true, most students will consequently adopt a conforming, passive role since it is likely to be the safest and most rewarded strategy. We can conclude from these studies, then, that characteristics of creative personalities are not being properly encouraged or rewarded. Guilford (1957) makes the point clearly when he writes:

Education has emphasized abilities in the areas of convergent thinking and evaluation, often at the expense of development in the area of divergent thinking. We have attempted

to teach students how to arrive at "correct" answers that our civilization has taught us are correct. This is convergent thinking.... Outside the arts we have generally discouraged the development of divergent-thinking abilities, unintentionally but effectively (p. 172).

While the attitudes of teachers toward behaviors characteristic of creative personalities has received some attention, to date, no research has been done which focuses on the attitudes of other persons engaged in the educational enterprise such as administrators or counsellors. Many counselling theorists do, of course, stress the importance of accepting and respecting the individuality of counsellees (Dabrowski, 1964; Fromm, 1967; Halkides, 1958; Maslow, 1958; Rank, 1945; Rogers, 1962; Wenkart, 1963). Wrenn (1965) insists that counsellors must give special attention to students who engage in original activity of a creative nature. He expresses concern in this regard:

How are counsellors helping these uncomfortable creative students to respect themselves and their uniqueness of thinking, to dedicate their talents not only to the discovery of truth but to the development of societal health? I fear that if the counsellor fails to see not only the loneliness but the preciousness of these individuals they will be lost to mediocrity (p. 62).

Morris (1967) feels that guidance counsellors, along with teachers, have institutionalized the process of choice-making so that students will come to be like the prototype, social person that the educators consider as ideal.

To date, research has also been neglected in the area of the effect of university training on future teacher's attitudes toward characteristics of creative individuals. Harding (1963) holds that in general we need a more creative trend in higher education. Getzels and Jackson (1963) support this view, stating that in higher education,

... we try to convert our divergent students into convergent students. Divergent fantasy is often called 'rebellious' rather than germinal; unconventional career choice is often labelled 'unrealistic' rather than courageous (p. 172).

Change of attitude toward behaviors typical of creative persons as a result of training or experience has not, however, been explored.

I. STATEMENT OF THE PROBLEM

The present study will focus on the following questions, which, to date, have not been investigated.

- (1) What correlation, if any, exists between increased training, sex of the teacher, and type of program (i.e. elementary, or secondary), and teacher attitudes toward, and acceptance of, those behaviors associated with creative personalities?
- (2) Do experienced teachers manifest different attitudes toward characteristics typical of

the creative person when contrasted with those manifested by student teachers?

- (3) What are the attitudes of counsellors, administrators and teachers at various grade levels toward traits which indicate the presence of creative potential?

As this is an exploratory study in a generally uninvestigated area, and as it would be difficult to justify predicting directional changes either on the basis of theory or previous empirical findings, no hypotheses are being put forward.

One would hope, however, that teachers and counsellors with more university training of a kind which places an emphasis on sponsoring creativity in students, would value and reward those behavioral characteristics which correlate with the presence of creative talent. If, however, teacher-training lacks this emphasis and stresses pedantry, conformity and discipline, an opposite effect might be expected. Increased university training of the latter type might conceivably reduce an aspiring teacher's tolerance of those behaviors associated with the creative personality, thus indicating the necessity for a re-evaluation of the orientation and methods of the teacher-training program.

CHAPTER II

METHOD

Subjects

The "Ideal Pupil Checklist" (Torrance, 1965b) was completed during the last week in April, by a total of one hundred and forty-six teachers, one hundred and eighty-nine teachers-in-training and forty-five counsellors. The teachers had at least one year of experience and had received four years of university preparation. The checklist was sent by mail to each of the three hundred and twenty teachers holding Bachelor of Education degrees who were teaching in the Edmonton Separate Schools. The checklist was also sent by mail to each of the eighty-two counsellors at that time employed by the Edmonton Public and Separate Schools. Five of the checklists returned by the teachers were not used because of inadequate data. Nine of the checklists returned by the counsellors were discarded because the counsellors involved were not counselling the two-thirds time required for inclusion as sample subjects in this study.

One hundred and two teachers-in-training who were completing their first year of university training at the University of Alberta were personally administered the checklist during seminar periods. The seminar groups were randomly chosen from the list of groups taking the

compulsory first year course in Educational Psychology.

Eighty-seven senior students who were completing their fourth year in the education program at the University of Alberta, were also personally administered this checklist during various class periods. The classes were those offered for the testing by professors teaching the compulsory senior courses in Educational Psychology and Educational Foundations.

A breakdown of the total sample shows an almost equal number of males and females in each of the groups used as subjects.

Instruments

The "Ideal Pupil Checklist" (Torrance, 1965), a copy of which is to be found in Appendix A, was used, as well as an autobiographical data sheet with questions concerning present employment, position, area of major study, number of years experience, age and sex. This data sheet was drawn up by the author and may be found in Appendix B.

The "Ideal Pupil Checklist" consists of sixty-two personality characteristics, sixty of which have been found through fifty empirical studies to differentiate groups of highly creative individuals from similar groups of less creative persons. In the fifty empirical studies used, highly creative individuals who had been identified

on some acknowledged standard of creative behavior, were contrasted with comparable but less creative persons on traditional personality measures such as the Thematic Apperception Test, The Minnesota Multiphasic Personality Inventory, the Rorschach Ink Blots and others. Eighty-four characteristics derived from a survey of these studies were first chosen for the checklist. Since some of the characteristics were overlapping, the list was reduced to sixty characteristics, with "healthy" and "physically strong" added for reference purposes.

While Torrance's checklist has been used in several studies, no reliability data is available on it. The author therefore tested for reliability by administering it to a class of fifty third year Education students at the University of Alberta. The checklist was readministered to the same class two weeks later. A correlation of .63 was found between each student's raw scores on the two tests using a Pearson product-moment correlation. A correlation of .92 was found between the composite Q-sort rankings of the sixty-two items on the two tests when standard Q-sort procedures were used.

Procedure

The checklist was personally administered to the teachers-in-training during various class periods, and mailed to the teachers and counsellors.

The subjects were asked to consider the sixty-two characteristics listed on the checklist and indicate by:

- (1) a single check the characteristics they think should be encouraged;
- (2) a double check the five characteristics which they consider most important and believe should be encouraged most highly;
- (3) a strike-out, those characteristics they consider undesirable and which should be discouraged and punished.

The teachers and counsellors were asked, in addition, to indicate on a separate column, the characteristics which they in fact do encourage or discourage in their present practice.

For each of the four groups, teachers, counsellors, and first year and fourth year teachers-in-training, an index was obtained for each of the sixty-two checklist characteristics by weighting responses as follows: two points for a double check, one point for a single check, zero points for no check nor strike-through, and minus one for each strike-through. Thus each checklist item received a total value. On the basis of these indices, the items were then ranked from one (most desirable) to sixty-two (least desirable) for each of the four groups and various classified groupings.

Torrance's Expert Creative Personality Q-Sort (1965b) was employed in this study as the criterion against which to compare the response pattern of the subject groups. Torrance developed his Expert Creative Personality Q-sort in the following manner:

The sixty-two statements in the Ideal Pupil Checklist were transformed into a Q-sort and rated by a panel of ten judges, all of whom had had advanced graduate courses in personality theory and all of whom had been serious students of the creative personality for at least one year. The judges' ratings of the characteristics were combined and converted into a composite Q-sort by adding the rating received by each item, ranking the items on the basis of these values, and then placing them into the original Q-sort distributions (1, 3, 5, 9, 13, 13, 9, 5, 3, 1) (p. 224).

In a similar way, each set of rankings derived from groups of this study were transformed into the same Q-sort distribution as employed by Torrance and the resulting composite Q-sort ratings of teachers, counsellors and teachers-in-training were correlated with the composite ratings of experts by means of the Pearson product-moment correlation. A correlation matrix was then devised to compare the ratings of the various groups.

CHAPTER III

RESULTS

Table I contains a summary of the composite rankings of the four groups for each of the sixty-two items. Numerous similarities and differences can be noted in these rankings. The characteristics associated with social skills are ranked high by all four groups of subjects.

An examination of the nine most favored characteristics of each of the four groups in Table I reveals which values are being most encouraged and provides a sharp contrast with the characteristics valued by the experts. "Consideration for others" ranks high in most groups as well as "Courteous" and "Self-confident". With the exception of teachers-in-training with one year of university education, "Independent in thinking" is also valued by educators. It can also be seen from Table I that all four groups discourage the following traits: "Emotional", "Emotionally sensitive", "Non-conforming", "Becomes preoccupied with tasks", and "Regresses occasionally."

A better index of the extent to which the values of each sample group conform to creative values as measured by the expert's description of the creative personality is obtained when the correlation between the composite Q-sort

TABLE I

COMPOSITE RANKING BY FOUR GROUPS OF EDUCATORS OR FUTURE EDUCATORS OF CHARACTERISTICS
CONTAINED IN THE IDEAL PUPIL CHECKLIST FOR THE FOUR SUBJECT-GROUPS

Teachers (One Year Experience or More)	Counsellors	Counsellors	Teachers-In-Training (One Year Preparation)	Teachers-In-Training (Four Years Preparation)	Teachers (Experienced)
"Ideal Practice" N=146	"Actual Practice" N=45	"Ideal Practice" N=45	"Ideal Practice" N=102	"Ideal Practice" N=87	"Actual Practice" N=146
1. Considerate of others	Considerate of others	Independent in thinking	Considerate of others	Independent in thinking	Considerate of others
2. Independent in thinking	Altruistic (Works for the good of others)	Considerate of others	Versatile	Considerate of others	Courteous
3. Altruistic (Works for the good of others)	Independent in thinking	Self-confidence	Self-confident	Versatile	Does work on time
4. Self-confident	Sense of humor	Altruistic (Works for the good of others)	Determined	Self-confident	Self-confident
5. Sincere	Self-confident	Sense of humor	Industrious	Sense of humor	Independent in thinking
6. Courteous	Courteous	Courageous in convictions	Sincere	Curious	Industrious
7. Receptive to the ideas of others	Sincere	Industrious	Sense of humor	Independent in judgment	Sense of humor
8. Courageous in convictions	Does work on time	Curious	Independent in thinking	Sincere	Talkative
9. Sense of humor	Industrious	Receptive to the ideas of others	Healthy	Receptive to the ideas of others	Obedient
10. A self-starter	Curious	Persistent	Courteous	Adventurous	Receptive to the ideas of others
11. Industrious	A self-starter	A self-starter	A self-starter	A self-starter	Sincere
12. Healthy	Healthy	Does work on time	Obedient	Desires to excel	Altruistic (Works for the good of others)
13. Does work on time	Courageous in convictions	Versatile, well-rounded	Receptive to the ideas of others	Determined	Courageous in convictions
14. Curious	Determined	Sense of beauty	Adventurous	Energetic	A self-starter
15. Strives for distant goals	Energetic	Attempts difficult tasks	Desires to excel	Industrious	Desires to excel
16. Adventurous	Persistent	Adventurous	Does work on time	Attempts difficult tasks	Versatile, well-rounded
17. Determined	Strives for distant goals	Energetic	Visionary	Courteous	Curious
18. Sense of beauty	Versatile, well-rounded	Thorough	Attempts difficult tasks	Competitive	Thorough
19. Versatile, well-rounded	Attempts difficult tasks	Determined	Curious	Persistent	Determined
20. Desires to excel	Receptive to the ideas of others	Willing to take risks	Remembers well	Strives for distant goals	Healthy
21. Thorough	Thorough	Healthy	Popular, well liked by peers	Healthy	Attempts difficult tasks
22. Haughty and self satisfied	Sense of beauty	Self-sufficient	Thorough	Does work on time	Sense of beauty
23. Attempts difficult tasks	Willing to accept the judgment of authorities	Strives for distant goals	Independent in judgment	Thorough	Willing to accept the judgment of others
24. Willing to take risks	Adventurous	Courteous	Competitive	Remembers well	Strives for distant goals
25. Energetic	Desires to excel	Desires to excel	Strives for distant goals	Altruistic (Works for the good of others)	Independent in thinking
26. Persistent	Independent	Independent in judgment	Sense of beauty	Intuitive	Persistent
27. Willing to accept judgments of authorities	Obedient	Emotionally sensitive	Altruistic (Works for the good of others)	Courageous in convictions	Remembers well
28. Obedient	Self-sufficient	Remembers well	Willing to accept judgment of others	Sense of beauty	Energetic
29. Independent in thinking	Remembers well	Spirited in disagreement	Intuitive	Willing to take risks	Intuitive
30. Remembers well	Emotionally sensitive	Affectionate	Affectionate	Obedient	Adventurous
31. Competitive	Popular, well liked by peers	Intuitive	Courageous in convictions	Self-sufficient	Competitive
32. Popular, well liked by peers	Willing to take risks	Sincere	Prefers complex tasks	Willing to accept judgments of others	Popular, well liked by peers
33. Versatile, well-rounded	Competitive	Visionary	Self-sufficient	Popular, well liked by peers	Willing to take risks
34. Affectionate	Physically strong	Self-assertive	Self-assertive	Self-assertive	Quiet
35. Self-assertive	Self-assertive	Always asking questions	Persistent	Prefers complex tasks	Self-assertive
36. Becomes pre-occupied with tasks	Intuitive	Popular, well liked by peers	Willing to take risks	Spirited in disagreement	Self-sufficient
37. Physically strong	Affectionate	Physically strong	Never bored	Visionary	Physically strong
38. Never bored	Always asking questions	Willing to accept the judgment of authorities	Always asking questions	Always asking questions	Affectionate

TABLE I (CONTINUED)

Teachers (One Year Experience or More)	Counsellors	Counsellors	Teachers-In-Training (One Year Preparation)	Teachers-In-Training (Four Years Preparation)	Teachers (Experienced)
"Ideal Practice" N=146	"Actual Practice" N=45	"Ideal Practice" N=45	"Ideal Practice" N=102	"Ideal Practice" N=87	"Actual Practice" N=146
39. Emotionally sensitive	Quiet	Competitive	Physically strong	Affectionate	Never bored
40. Self-sufficient	Like to work alone	Unwilling to accept say-so	Spirited in disagreement	Never bored	Always asking questions
41. Always asking questions	Never bored	Prefers complex tasks	Energetic	Physically strong	Prefers complex tasks
42. Quiet	Spirited in disagreement	Like to work alone	Likes to work alone	Unwilling to accept say-so	Unwilling to accept say-so
43. Unwilling to accept say-so	Unwilling to accept say-so	Never bored	Unwilling to accept say-so	Likes to work alone	Visionary
44. Likes to work alone	Visionary	Sophisticated	Talkative	Becomes preoccupied with tasks	Likes to work alone
45. Spirited in disagreement	A good guesser	Nonconforming	Emotionally sensitive	Nonconforming	Reserved
46. Reserved	Prefers complex tasks	Obedient	Quiet	Emotionally sensitive	Spirited in disagreement
47. Bashful	Becomes preoccupied in tasks	Quiet	Nonconforming	Sophisticated	Becomes pre-occupied with tasks
48. Nonconforming	Reserved	Regresses occasionally (playful, child-like)	Becomes preoccupied with tasks	Quiet	Emotionally sensitive
49. Becomes pre-occupied with tasks	Sophisticated	A good guesser	Regresses occasionally (playful, childlike)	Talkative	Sophisticated
50. Considerate of others	Nonconforming	Reserved	A good guesser	Reserved	Nonconforming
51. A good guesser	Regresses occasionally (playful, child-like)	Talkative	Critical of others	Critical of others	A good guesser
52. Sophisticated	Talkative	Becomes pre-occupied with tasks	Reserved	Regresses occasionally (playful, childlike)	Regresses occasionally (playful, childlike)
53. Regresses occasionally (playful, childlike)	Emotional	Emotional	Sophisticated	A good guesser	Emotional
54. Talkative	Timid	Timid	Emotional	Emotional	Critical of others
55. Emotional	Bashful	Critical of others	Timid	Timid	Timid
56. Timid	Stubborn	Stubborn	Fault-finding	Stubborn	Fault-finding
57. Fault-finding	Critical of others	Bashful	Stubborn	Haughty, self-satisfied	Bashful
58. Disturbs class organization or procedures	Disturbs class organization or procedures	Disturbs class organization or procedures	Domineering	Fault-finding	Stubborn
59. Negativistic	Haughty, and self-satisfied	Haughty and self-satisfied	Bashful	Bashful	Negativistic
60. Stubborn	Negativistic	Fault-finding	Negativistic	Negativistic	Disturbs class organizations or procedures
61. Haughty and self-satisfied	Domineering	Negativistic	Haughty, self-satisfied	Disturbs class organization or procedures	Haughty and self-satisfied
62. Domineering	Fault-finding	Domineering	Disturbs class organization or procedures	Domineering	Domineering

ratings of each group and the expert Q-sort ratings is examined. These data are shown in Table II. The ratings of teachers-in-training with four years of university training and counsellors correlate most closely with expert Q-sort ratings. It is noteworthy too, that both experienced teachers and school counsellors correlate more highly with expert ratings in their ranking of ideal practice than in their rankings of what is in fact done in practice. Most correlations in the table are significant at the .01 level, except the ratings of teachers of "Actual Practice", which showed no significance.

TABLE II
CORRELATION BETWEEN THE SUBJECT-GROUPS AND
EXPERTS' RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Teachers-in-training (one year university training)	102	-	.277*
Teachers-in-training (four years university training)	87	-	.461**
Teachers (one year or more of experience)	146	.233	.389**
Counsellors (counselling two-thirds time)	45	.309**	.461**

* P < .05

** P < .01

The correlation between the nine highest composite Q-sort ratings of the four groups with the nine highest composite Q-sort ratings of expert judges on creative personality is shown in Table III. A significant correlation with the experts' ratings is found only in the case of teachers and school counsellors. Interestingly, when this more selective comparison is made a rather different picture emerges than was apparent in the data of Table II. The effect of increased training noticeable in Table II is no longer apparent when the comparison between the subject groups and the experts is based only on the nine most highly rated items.

A detailed examination of the factor of experience as related to the encouragement of creativity is presented in Table IV. The correlation between composite Q-sort group ratings of teachers-in-training and teachers with varying experience, with the composite Q-sort ratings of experts on creative personality reveals that teachers-in-training with four years of university training and no experience correlate higher with the experts' ratings, than teachers-in-training with only one year of university preparation. It is also to be noted that the ratings of actual practice of all teachers regardless of years of experience show no significant correlation with the experts' ratings, yet

TABLE III

CORRELATION BETWEEN THE SUBJECT-GROUPS AND EXPERTS
ON THE NINE HIGHEST RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Teachers-in-training with one year university training	102	-	.564
Teachers-in-training with four years university training	87	-	.516
Teachers with one year or more of experience	146	.753**	.798**
Counsellors (counselling two-thirds time)	45	.734*	.713*

* P < .05

** P < .01

TABLE IV

CORRELATION BETWEEN RATINGS OF TEACHERS-IN-TRAINING
AND EXPERIENCED TEACHERS WITH EXPERTS' RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Teachers-in-training with one year of university preparation	102	-	.277*
Teachers-in-training with four years of university preparation	87	-	.461**
Teachers with one to five years of experience	51	.228	.416**
Teachers with six to fifteen years of experience	47	.233	.358**
Teachers with sixteen or more years of experience	48	.233	.358**

* P < .05

** P < .01

their ratings of "ideal practice" correlate with the experts' ratings at the .01 level of significance. In short, it is the training experience rather than teaching experience itself which appears to result in a greater convergence between the view of teachers and the experts' view of what constitutes the "ideal pupil". However, while training appears to promote an appreciation of creative thinking and creative behavior it seems to have little effect on the teachers' actual classroom behavior.

The nine personality characteristics most valued and encouraged by the panel of expert judges, students, and teachers with a varying number of years of experience, presented in Table V again shows that "Consideration of others" ranks high. Experienced teachers tend to stress "Industriousness" and "Obedient". This is particularly true of teachers with over fifteen years of experience. This group also values "Does work on time" and "Thorough" and does not strongly encourage any of the characteristics ranked most highly by the experts.

Table VI presents the correlations between the nine highest composite Q-sort ratings of students and of teachers with varying experience, with the composite Q-sort ratings of experts on creative personality. The students' ratings and the ratings pertinent to the actual practice of teachers with one to five years of experience do not correlate significantly with the experts' ratings.

TABLE V

COMPARISON OF EXPERIENCED TEACHERS AND EXPERTS ON THE
NINE HIGHEST RATINGS

Expert Judges	Teachers with One Year to Five Years Experience	
	Actual Practice	Ideal Practice
1. Courageous in convictions	Considerate of others	Considerate of others
2. Curious	Does work on time	Independent in thinking
3. Independent in thinking	Sense of humor	Industrious
4. Independent in judgment	Independent in thinking	Self-confident
5. Willing to take risks	Obedient	A self-starter
6. Intuitive	Industrious	Altruistic
7. Becomes pre-occupied with tasks	Self-confident	Sincere
8. Persistent	Sincere	Curious
9. Unwilling to accept say-so	Courteous	Courageous in convictions

TABLE V (CONTINUED)

Expert Judges	Teachers with Six to Fifteen Years of Experience		Teachers with Over Fifteen Years of Experience	
	Actual Practice	Ideal Practice	Actual Practice	Ideal Practice
1. Courageous in convictions	Courteous	Considerate of others	Considerate of others	Industrious
2. Curious	Self-confident	Independent in thinking	Courteous	Considerate of others
3. Independent in thinking	Desires to excel	Altruistic	Receptive to the ideas of others	Altruistic
4. Independent in judgment	Independent in thinking	Self-confident	Thorough	Courageous in convictions
5. Willing to take risks	Considerate of others	Independent in judgment	Sincere	Courteous
6. Intuitive	Receptive to the ideas of others	Versatile	Self-confident	Sense of humor
7. Becomes pre-occupied with tasks	Altruistic	Courteous	Does work on time	Independent in thinking
8. Persistent	Industrious	Sincere	Industrious	Receptive to the ideas of others
9. Unwilling to accept say-so	Obedient	Receptive to the ideas of others	Altruistic	Does work on time

TABLE VI

CORRELATION OF STUDENTS AND EXPERIENCED TEACHERS
WITH EXPERTS ON THE NINE HIGHEST RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Teachers-in-training with one year of university training	102	-	.564
Teachers-in-training with four years of university training	87	-	.516
Teachers with one to five years of experience	51	.592	.795**
Teachers with six to fifteen years of experience	47	.734*	.722*
Teachers with fifteen years or more of experience	48	.728*	.868**

* P < .05

** P < .01

The sex of the teachers does not have any relationship with teacher encouragement of creative traits in students. The correlation between the composite Q-sort ratings of male and female educators with the composite Q-sort ratings of experts on creative personality is given in Table VII. It can be seen that all correlations are significant at the .01 level.

Table VIII contrasts those nine personality traits which the expert judges feel should be most valued and encouraged with the nine personality traits valued most highly by male and female students and teachers in this

TABLE VII

CORRELATION BETWEEN THE RATINGS OF SUBJECTS WHEN
SEPARATED BY SEX AND EXPERTS' RATINGS

Group	N	Correlation Ideal Practice
Male Students	104	.380**
Male Counsellors and Teachers	105	.336**
All Males	209	.336**
Female Students	157	.358**
Female Counsellors and Teachers	84	.313**
All Females	241	.371**

* P < .05

** P < .01

TABLE VIII

MALE AND FEMALE SUBJECTS CONTRASTED WITH EXPERTS ON THE
NINE MOST HIGHLY VALUED PERSONALITY TRAITS

Expert Judges	Males Ideal Practice	Females Ideal Practice
1. Courageous in convictions	Considerate of others	Considerate of others
2. Curious	Self-confident	Independent in thinking
3. Independent in thinking	Sense of humor	Self-confident
4. Independent in judgment	Courageous in convictions	Sense of humor
5. Willing to take risks	Curious	Versatile
6. Intuitive	Altruistic	Sincere
7. Becomes pre-occupied with tasks	Versatile	Industrious
8. Persistent	Desires to excel	Courteous
9. Unwilling to accept say-so	Independent in judgment	Healthy

study. The women listed only one characteristic, "Independent in thinking", and the men three characteristics "Courageous in convictions", "Curious", "Independent in judgment", which are also listed by the expert judges. The correlation between these groups based on the nine highest composite Q-sort ratings are shown in Table IX.

TABLE IX

CORRELATION BETWEEN THE RATINGS OF MALE AND FEMALE STUDENTS AND EDUCATORS WITH EXPERTS ON THE NINE HIGHEST RATINGS

Group	N	<u>Correlation</u> <u>Ideal Practice</u>
Male	209	.687*
Female	241	.539

* $P < .05$

The composite Q-sort ratings of the men correlates significantly at the .05 level with those of the experts but a significant relationship is not demonstrated between the women's and the experts' ratings.

Table X which presents an analysis of the data in terms of type of university program followed or being followed, reveals the Q-sort ratings of students and teachers in the elementary program to correlate at the .01 level of significance while ratings of students and teachers in the secondary program correlate at the .05 level of significance with the ratings of the experts.

TABLE X

CORRELATION OF STUDENTS AND TEACHER RATINGS WITH EXPERTS' RATINGS ON THE BASIS OF THE UNIVERSITY PROGRAM FOLLOWED

Group	N	Correlation Ideal Practice
Students in the Elementary Program	54	.228
Students in the Secondary Program	131	.380**
Teachers in the Elementary Program	30	.354**
Teachers in the Secondary Program	100	.358**
Students and Teachers in the Elementary Program	84	.322**
Students and Teachers in the Secondary Program	231	.246*

* P < .05

** P < .01

Students in the secondary program correlate most closely with the experts' ratings.

The subjects in this study were analyzed in terms of the type of their university training (i.e. elementary or secondary programs) and compared with the creativity experts on those traits which should be most highly valued and encouraged in pupils. The comparison between these groups on the nine traits they rank highest is shown in Table XI. In groups, students and teachers alike, "Consideration of others" holds first place, a trait which receives no emphasis by the experts. On the whole little difference between the group in the elementary programs and

TABLE XI

ELEMENTARY AND SECONDARY STUDENTS AND TEACHERS CONTRASTED
WITH EXPERTS ON THOSE PERSONALITY TRAITS MOST VALUED IN
PUPILS

Expert Judges	Students and Teachers in the Elementary Program	Students and Teachers in the Secondary Program
	Ideal Practice	Ideal Practice
1. Courageous in conviction	Considerate of others	Considerate of others
2. Curious	Independent in Thinking	Courteous
3. Independent in thinking	Sense of humor	Independent in thinking
4. Independent in judgment	Versatile	Sense of humor
5. Willing to take risks	Receptive to the ideas of others	Self-confident
6. Intuitive	Courteous	Versatile
7. Absorbed in tasks	Sincere	A self-starter
8. Persistent	Determined	Industrious
9. Unwilling to accept say-so	Desires to excel	Healthy

the group in the secondary program can be observed.

Table XII contains the correlation between the nine highest composite ratings of students and teachers in the elementary and secondary program of university education with composite Q-sort ratings of experts on the creative personality. The coefficients shown are of similar magnitude and neither reaches significance, providing no evidence that the program followed has any

bearing on teacher attitudes toward creative behaviors.

TABLE XII

CORRELATION BETWEEN ELEMENTARY AND SECONDARY SUBJECTS
WITH EXPERTS BASED ON THE NINE HIGHEST RATINGS

Group	N	Correlation Ideal Practice
Students and teachers in the Elementary Program	84	.526
Students and teachers in the Secondary Program	231	.562

No significance of correlation at the .05 or .01 level.

A quite different picture emerges from the correlation between composite group Q-sort ratings of experts on creative personality and those of experienced educators when the correlations are based on all sixty-two trait items. Table XIII reveals some of these differences. As compared with other educators, school counsellors' ratings correlate most closely with expert ratings, both in terms of actual practice and ideal practice. In terms of actual practice, junior high school and elementary school teachers are least encouraging of characteristics of creative students as is evidenced by the low non-significant correlations. Again one sees a discrepancy between traits valued by teachers and their actual classroom behavior.

TABLE XIII

CORRELATION BETWEEN RATINGS OF EXPERIENCED EDUCATORS
WITH EXPERTS' RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Administrators	29	.245*	.363**
High School Teachers	40	.282*	.412**
Junior High School Teachers	28	.197	.386*
Elementary School Teachers	33	.224	.282*
Counsellors	45	.309**	.461**

* P < .05

** P < .01

Table XIV contrasts the nine personality characteristics most valued and encouraged by the panel of expert judges with the traits most valued by five groups of experienced educators in various positions. In all groups "Consideration of others" ranks high. Counsellors, elementary and junior high school teachers are the only groups that include "Courageous in convictions" as a behavior to be reinforced. A cursory glance at Table XIV indicates that for every subject group, more creative behaviors are listed under "Ideal Practice" than are apparently reinforced in actual contact with pupils. Again it seems that the knowledge of what to value is present but this knowledge is, for some reason, not translated into practice.

TABLE XIV

THE NINE PERSONALITY CHARACTERISTICS MOST ENCOURAGED
BY EXPERIENCED EDUCATORS AND EXPERTS

Expert Judges	Administrators	
	Actual Practice	Ideal Practice
1. Courageous in convictions	Considerate of others	+Independent in thinking
2. Curious	Courteous	Considerate of others
3. Independent in thinking	+Independent in thinking	Self-confident
4. Independent in judgment	Self-confident	Courteous
5. Willing to take risks	Altruistic	Altruistic
6. Intuitive	Sincere	Receptive to the ideas of others
7. Becomes absorbed in tasks	Receptive to the ideas of others	Versatile
8. Persistent	Does work on time	+Independent in judgment
9. Unwilling to accept say-so	Industrious	Sincere

Note: (+) indicates traits emphasized by subjects which are also emphasized in the experts' listings.

TABLE XIV (CONTINUED)

Expert Judges	High School Teachers		Junior High Teachers	
	Actual Practice	Ideal Practice	Actual Practice	Ideal Practice
1. Courageous in convictions	Considerate of others	Self-confident	Considerate of others	+Independent in thinking
2. Curious	Receptive to the ideas of others	Considerate of others	Courteous	Considerate of others
3. Independent in thinking	Sense of humor	+Independent in thinking	Sincere	Self-starter
4. Independent in judgment	Self-confident	Altruistic	Obedient	Altruistic
5. Willing to take risks	Courteous	Sincere	+Curious	+Courageous in convictions
6. Intuitive	Does work on time	Sense of humor	Industrious	Sense of humor
7. Becomes absorbed in tasks	+Independent in thinking	Industrious	+Independent in thinking	+Curious
8. Persistent	Sincere	+Independent in judgment	Does work on time	Does work on time
9. Unwilling to accept say-so	Industrious	Receptive to the ideas of others	Altruistic	Courteous

TABLE XIV (CONTINUED)

Expert Judges	Elementary Teachers		Counsellors	
	Actual Practice	Ideal Practice	Actual Practice	Ideal Practice
1. Courageous in convictions	Considerate of others	Considerate of others	Considerate of others	Independent in thinking
2. Curious	Courteous	Courageous in conviction	Altruistic	Self-confident
3. Independent in thinking	Industrious	A Self-starter	Independent in thinking	Altruistic
4. Independent in judgment	Does work on time	Courteous	Sense of humor	Considerate of others
5. Willing to take risks	Sense of humor	Altruistic	Self-confident	Sense of humor
6. Intuitive	Obedient	Independent in thinking	Courteous	Courageous in conviction
7. Becomes absorbed in tasks	Courageous in convictions	Self-confident	Sincere	Industrious
8. Persistent	Receptive to the ideas of others	Industrious	Does work on time	Curious
9. Unwilling to accept say-so	Altruistic	Receptive to the ideas of others	Industrious	Receptive to the ideas of others

The correlation between the nine highest composite ratings of five groups of experienced educators in various positions and the nine highest composite ratings of experts on creative personality are shown in Table XV. Administrators correlate lowest with experts' ratings. Junior high school teachers, while correlating at the .01 level of significance with expert ratings in terms of "Ideal Practice" did not correlate significantly in terms of actual practice.

TABLE XV

CORRELATION BETWEEN THE EXPERIENCED EDUCATORS IN
VARIOUS POSITIONS AND EXPERTS ON THE NINE
HIGHEST RATINGS

Group	N	Correlation	
		Actual Practice	Ideal Practice
Administrators	29	.361	.644
High School Teachers	40	.702*	.648*
Junior High School Teachers	28	.631	.781**
Elementary School Teachers	33	.843**	.932**
Counsellors	45	.734*	.713*

* P < .05

** P < .01

CHAPTER IV

DISCUSSION

Limitations

While the Ideal Pupil Checklist has frequently been used by Torrance and his associates to measure attitudes toward behaviors associated with creative persons, it does have several limitations. Some of the trait-items listed are vague and too broad in meaning. The particular situation often determines one's attitude to many behaviors, thus it is difficult to accurately specify what traits one would encourage or discourage. At present however, no other short and easily administered test to measure educators' attitudes towards creative personalities has been devised.

The group of teachers used as subjects in this study were all from the Edmonton Separate School System. Most of the teachers would be Catholic and this sampling restriction may call for caution in generalizing the findings to teachers as a whole.

Implications for Educational Practice and Research

The findings of the study show that students with four years of university training value the characteristics found to be associated with creative personalities more than do first year students. This seems to indicate a

positive correlation between the number of years of teacher preparation and the appreciation of creative persons. Graduating students then, do value traits characteristic of creative personalities, however, it is to be noted that teachers with one to five years of experience are least encouraging of behaviors associated with creative pupils in terms of actual practice. Since increased experience only slightly affects the encouragement of characteristics of innovators even though the teachers continue to value those traits, it would seem then that the present classroom situations in some way prevent the encouragement of creative behavior in daily classroom activities. In view of society's urgent need for original thinkers and creators, educators will want to investigate what factors do, in fact, hinder the actual encouraging of creative traits in the classroom.

It is interesting to note that of the five groups of educators studied, elementary school teachers and junior high school teachers tend to encourage creative traits least, in terms of actual practice. Although this is not the case if one only considers the nine most highly rated traits. In general, however, emphasis is placed on the value of being courteous, considerate, getting work done on time, industriousness and obedience. All these values are likely to inhibit the junior high school students especially, until they learn to cope constructively with

this kind of discouragement of their creative abilities. Torrance (1964) in his studies of children in the United States also found that there is a drop in creative development when the child enters kindergarten, at the fourth grade, the seventh grade and the eighth grade. Torrance states that what is most disturbing in this information is the apparent rise in personality disturbance which accompanies these general drops in creative functioning. He holds that there is a discontinuity between the intermediate grades and junior high school. Torrance (1964) comments on this discontinuity as follows:

The discontinuities referred to above take many forms. One important type, however is the shift from the elementary school which gives the opportunities for the acquisition of knowledge through both deliberate and spontaneous ways, through authoritative identification and discovery or creative ways of learning to the high school which teaches rather exclusively by authority.... There has always been a fairly general recognition that man prefers to learn creatively, by exploring, questioning, experimenting, manipulating, testing and modifying ideas or solutions (p. 221).

The present study seems to indicate that teachers in junior high school are less encouraging of creative traits than elementary teachers, thus there is evidence of a discontinuity similar to that found by Torrance. It might be surmised that teachers at the elementary level and at the junior high school level especially, favor teaching by authority rather than by fostering the more

natural ways of learning. The following questions might be asked: Are junior high school teachers pressured into teaching by authority because of conditions, such as classes which are too large for the effective disciplining of this age group and for the giving of attention to individual differences? Do grade nine departmental examinations which consist of questions of recall and multiple-choice questions which do not stimulate highly creative students, also restrict and pressure the teacher? Do standard departmental examinations encourage across-teacher across-pupil comparisons which lead to conformity and rigidity in the classroom? These questions require serious consideration by both teachers and administrators.

The study reveals a lack of sex differences in teachers attitudes. In view of the fact that it is commonly assumed that male teachers would be more accepting of "creative behaviors", which are stereotypically more masculine behavior, such as independence, risk-taking, and courage, it is interesting to note that males encourage stereotypically feminine qualities such as politeness and consideration of others.

It is also to be noted that counsellors, in terms of their present practice and their idea of what should be done, are more encouraging of traits characteristic of potentially creative students than any other educator. The question can be asked: Is this the result of the counsellors'

personality or the counsellors' training? To date, studies of counsellors' personalities (McGowan, 1964) show that counsellors, as a group, have no distinctive personality traits; therefore one might surmise that the training of a counsellor has a certain orientation or perhaps includes a course which fosters appreciation of these values, which might be incorporated into the general teacher-training program. It is particularly noteworthy that students in the elementary program are less encouraging of creative characteristics than students in the secondary program. Again, one might ask: Is there anything distinctive about the secondary program which fosters attitudes of appreciation for creative students which might be added to the elementary program?

Recent studies (Smeltzer, 1967; Torrance, 1965b) have shown that specific and purposeful modification of pupil personality can and does take place in the school. The school now must formally accept this responsibility. In view of this, educators will have to direct their attention to the values held by the teacher since as Myers (1961) has found, only those traits which are valued by individuals are encouraged in others.

Every group of educators in this study ranked "Being considerate of others" as the most important or second most important of the sixty-two character traits listed. Research (Torrance, 1965) has shown that highly

creative persons often lack this characteristic. They frequently become overly absorbed in their own personal work and consider this concern to be so important that they do not have time to be polite and show the consideration of others that is so highly valued in our society. While "Consideration of others" seen as genuine respect for the individuality of a person is indeed something to be encouraged, the fact that this trait is placed at the top of the hierarchy of values may reflect an overemphasis on conformity to the thinking of others which could work against the development of creative abilities.

The evidence of the data also leads one to suspect that the educators in this study are more concerned that their students become well-adjusted (courteous, considerate, sincere, sense of humor) rather than that they actualize their potentialities (courageous in convictions, independent in judgment, willing to take risks, absorbed in work, persistent, unwilling to accept things on mere say-so, visionary).

It is also to be noted that the data show an element of conflict and ambivalence. Educators appear to want students to be independent in thinking but they are not particularly desirous that they be independent in judgment and courageous in convictions; yet it is these traits which enable the creative, productive people to make their contributions. It is important that educators be

helped to recognize the factors which go to make up the creative individual's personality, in order that such students might be helped to become more acceptable in society without sacrificing their creativity and also in order that teachers might be able to protect themselves from personal frustrations and tensions because of creative students. Since teachers reflect in great measure general societal attitudes, it is difficult to learn to understand, accept and encourage original and divergent thinking. The values which each group of educators encourage are on the whole quite similar and correspond closely to the values held by the so-called "normal man" described by Whyte (1956), MacKinnon (1962), and Reisman (1950). The public only tolerates the divergent individual. MacLean (1967) states:

Not only is the creative person penalized by society and the school because of his apparent undervaluation of "fact", but also he suffers from being considered somewhat socially irresponsible... truly creative persons are "genuinely independent"; that is they are not conformists in their ideas, but they are not deliberate nonconformists either. Creative persons, are, then, true liberals -- and public education is, perhaps necessarily, society's most conservative force (p. 28).

With this information in view, it would seem that educators, and elementary and junior high school teachers in particular must be cautious about over-emphasizing consideration of others on a superficial level without authentically working for the good of others; they must

guard against insisting on speedy, efficient work habits which offer too little opportunity to learn to think and judge; they must not promote an industriousness which is a type of activism rather than a serious absorption in work. Accepting a passive obedience which is not based on convictions courageously maintained must also be avoided. Greater emphasis will need to be placed upon intellectual courage, developing a sense of vision and providing an atmosphere of psychological freedom where students will feel free to make hypotheses or intelligent guesses, to take risks and to refuse to accept things on mere say-so.

Since this study has used mainly Catholic teachers as subjects it would be interesting to know how non-Catholic teachers would compare with the experts' ratings and with the Catholic teachers' ratings. In view of the authoritarian aspect of the Catholic religion one might expect Catholic teachers in Catholic schools to be less inclined to encourage creative thinking. It would also be helpful to know how the composite ratings of Catholic and non-Catholic teachers would compare with the experts' ratings.

Another valuable follow-up study would be to see if teachers whose ratings have a high correlation with the experts' ratings do, in fact, stimulate and foster the development of the creative abilities in their students.

As research attempts to investigate these and similar

areas, two pertinent questions for educators will be more comprehensively answered. Is education today fostering or frustrating the creative impulse? Are we allowing, let alone rewarding, divergent productivity within the framework of the school situation? It is to be hoped that drawing attention to the fostering of original thinking and innovative action which is vital to the future of a society challenged by continuous change and an increasing number of complex social problems, will help educators to encourage and develop in students these qualities which identify and characterize flexible and potential leadership.

CHAPTER V

SUMMARY

The need for creative thinkers and innovators has stimulated researchers in the educational field to give much attention to the area of creativity. The present study has investigated several aspects of the fostering of creativity in students: the relationship of the amount and type of university training, the sex of the educator, and teaching experience and educators' attitudes toward personality characteristics of creative students. The attitudes of counsellors, teachers at various grade levels, and administrators toward behaviors denoting the presence of creativity potential were also studied.

Four groups of educators provided the data for the study. Teachers-in-training with one year of university education, teachers-in-training with four years of university education, teachers with varying experience, and counsellors rated the characteristics of the Ideal Pupil Checklist in terms of the personality traits of students which should be encouraged and those which should be discouraged. Experienced teachers and counsellors also rated those characteristics which, in actual practice, are encouraged in the classroom. These ratings were compared with ratings of the characteristics of the Ideal Pupil Checklist made by experts in the field of creativity.

The findings of the study are summarized as follows:

- (1) In all cases, the ratings of teachers and school counsellors in terms of what traits should ideally be encouraged in students were closer to the experts' ratings than were their ratings of what characteristics they do in actual practice, encourage.
- (2) Teachers-in-training with four years of university preparation appreciate and encourage traits of creative personalities more than teachers-in-training with one year of university education. The present teacher-training program does seem to instill some appreciation of the creative process.
- (3) No marked differences are seen among teachers of varying years of experience, or between male and female educators.
- (4) Teachers-in-training with four years of university preparation and school counsellors correlate most closely with the ratings of the experts.
- (5) In terms of actual practice in the school, ratings of junior high school and elementary school teachers have a low correlation with experts' ratings of characteristics to be encouraged when all sixty-two items are taken into consideration.

- (6) Administrators tend to be more encouraging of characteristics of creative students than elementary and junior high school teachers but less encouraging of creative traits than high school teachers and counsellors, in terms of actual practice. High school teachers and counsellors correlated more closely with experts ratings than any other group of educators, in terms of what traits should, ideally be encouraged in students.

It would seem then, that since the ratings of each group of educators were closer to the experts ratings in terms of what should ideally be encouraged than in terms of what is actually encouraged in practice, there are obviously factors present which prevent educators from functioning in accordance with their values and convictions within the school setting. This is particularly true at the elementary and junior high school levels. The study also suggests that the teacher-training program does appear to foster an appreciation of creative personalities. Therefore, one might conclude that while there is, in general, a lack of appreciation of creative persons on the part of school personnel, it is not the values and attitudes of the educators that require the focus of attention in educational research, but rather the factors within educational institutions which hinder administrators,

teachers and counsellors from encouraging personality characteristics of creative persons. Without such research, educators will find it difficult, if not impossible, to foster the development of creative thinkers and innovators so needed by our contemporary and future society.

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A P P E N D I C E S

APPENDIX A

STUDENTS' CHECKLIST

WHAT IS AN IDEAL PUPIL?

What kind of person would you like your pupils to become? Please try to describe the kind of person you would like your pupils to become by using the checklist of characteristics on this sheet. Check each of the characteristics which you think is generally desirable and should be encouraged. Then double check the five characteristics which you consider most important and should be encouraged above all others. Draw a line through those characteristics which you consider undesirable and should usually be discouraged.

<input type="checkbox"/> Adventurous	<input type="checkbox"/> Nonconforming
<input type="checkbox"/> Affectionate	<input type="checkbox"/> Negativistic
<input type="checkbox"/> Altruistic, working for	<input type="checkbox"/> Obedient
<input type="checkbox"/> the good of others	<input type="checkbox"/> Popular, well-liked
<input type="checkbox"/> Always asking questions	<input type="checkbox"/> by peers
<input type="checkbox"/> Attempts difficult tasks	<input type="checkbox"/> Persistent
<input type="checkbox"/> A Self-starter	<input type="checkbox"/> Prefers complex tasks
<input type="checkbox"/> A good guesser	<input type="checkbox"/> Physically strong
<input type="checkbox"/> Bashful	<input type="checkbox"/> Quiet
<input type="checkbox"/> Becomes preoccupied with	<input type="checkbox"/> Receptive to ideas of
<input type="checkbox"/> tasks	<input type="checkbox"/> others
<input type="checkbox"/> Considerate of others	<input type="checkbox"/> Regresses occasionally
<input type="checkbox"/> Critical of others	<input type="checkbox"/> (playful, childlike)
<input type="checkbox"/> Courageous in convictions	<input type="checkbox"/> Reserved
<input type="checkbox"/> Courteous	<input type="checkbox"/> Remembers well
<input type="checkbox"/> Curious	<input type="checkbox"/> Self-confident
<input type="checkbox"/> Competitive	<input type="checkbox"/> Self-assertive
<input type="checkbox"/> Desires to excel	<input type="checkbox"/> Self-sufficient
<input type="checkbox"/> Determined	<input type="checkbox"/> Sense of humor
<input type="checkbox"/> Domineering	<input type="checkbox"/> Sense of beauty
<input type="checkbox"/> Disturbs class organization	<input type="checkbox"/> Sincere
<input type="checkbox"/> or procedures	<input type="checkbox"/> Spirited in disagreement
<input type="checkbox"/> Does work on time	<input type="checkbox"/> Strives for distant
<input type="checkbox"/> Emotional	<input type="checkbox"/> goals
<input type="checkbox"/> Emotionally sensitive	<input type="checkbox"/> Stubborn
<input type="checkbox"/> Energetic	<input type="checkbox"/> Sophisticated
<input type="checkbox"/> Fault-finding	<input type="checkbox"/> Timid
<input type="checkbox"/> Haughty and self-satisfied	<input type="checkbox"/> Thorough
<input type="checkbox"/> Healthy	<input type="checkbox"/> Talkative
<input type="checkbox"/> Independent in judgment	<input type="checkbox"/> Unwilling to accept say-so
<input type="checkbox"/> Independent in thinking	<input type="checkbox"/> Visionary
<input type="checkbox"/> Intuitive	<input type="checkbox"/> Versatile, well-rounded

_____ Industrious
_____ Likes to work alone
_____ Never bored

_____ Willing to take risks
_____ Willing to accept
_____ judgments of authorities

TEACHERS' CHECKLIST

ENCOURAGE - DISCOURAGE?

Below this is a list of characteristics that teachers must almost continuously encourage or discourage in the children they teach. At some time it might be wise to encourage or discourage any one of these characteristics. We shall be concerned here with what characteristics are and/or should be generally encouraged or discouraged.

Column A will be used to describe existing practices (what you usually do or what you have observed to be the most common practice among teachers, if you are a teacher, or counsellors, if you are a counsellor).

Column B will be used to describe what you regard as most desirable for producing the kinds of persons our society needs.

1. First read through the list checking in Column A each characteristic that you usually encourage and in Column B each characteristic you believe should be generally encouraged. Use a check mark to indicate these characteristics.
2. Reread the list and doublecheck the five characteristics that you encourage most strongly in Column A and doublecheck the five characteristics you believe should be encouraged most strongly in Column B.
3. Now mark an "X" in Column A for each characteristic that you generally discourage and in Column B for each characteristic that you believe should be generally discouraged.

Characteristic	Column A Present Practices	Column B. What Should be Done	
Adventurous			1
Affectionate			2
Altruistic, working for the good of others			3
Always asking questions			4
Attempts difficult tasks			5
A self-starter			6
A good guesser			7
Bashful			8
Becomes preoccupied with tasks			9
Considerate of others			10

Characteristic	Column A Present Practices	Column B. What Should be Done
Critical of others		11
Courageous in convictions		12
Courteous		13
Curious		14
Competitive		15
Desires to excel		16
Determined		17
Domineering		18
Disturbs class organi- zation or procedures		19
Does work on time		20
Emotional		21
Emotionally sensitive		22
Energetic		23
Fault-finding		24
Haughty and self-satisfied		25
Healthy		26
Independent in judgment		27
Independent in thinking		28
Intuitive		29
Industrious		30
Likes to work alone		31
Never bored		32
Nonconforming		33
Negativistic		34
Obedient		35
Popular, well-liked by peers		36
Persistent		37
Prefers complex tasks		38
Physically strong		39
Quiet		40
Receptive to ideas of others		41
Regresses occasionally (Playful, childlike)		42
Reserved		43
Remembers well		44
Self-confident		45
Self-assertive		46
Self-sufficient		47
Sense of humor		48
Sense of beauty		49
Sincere		50
Spirited in disagreement		51
Strives for distant goals		52
Stubborn		53
Sophisticated		54

Characteristic	Column A Present Practices	Column B. What Should be Done
Timid		55
Thorough		56
Talkative		57
Unwilling to accept say-so		58
Visionary		59
Versatile, well-rounded		60
Willing to take risks		61
Willing to accept judgments of authorities		62

APPENDIX B

AUTOBIOGRAPHICAL DATA SHEET

Would you kindly place a check mark in the appropriate space provided or fill in the information requested. Check off all items which apply to you.

I. Present Position: 1) Student _____ Year _____
 2) Administrator _____
 3) Elementary Teacher _____
 4) Junior High Teacher _____
 5) Senior High Teacher _____
 6) School Counsellor _____
 7) Other _____

II. Subject in Which You Have Been or are Majoring:

Route: 1) Elementary _____
 2) Secondary _____
 Major: 1) Math _____
 2) Science _____
 3) English _____
 4) Languages _____
 (French, Latin, etc.)
 5) Fine Arts _____
 6) Social Studies _____
 7) Vocational-Industrial _____
 8) Other _____

III. Age: 1) 16 to 20 _____ 5) 36 to 40 _____
 2) 21 to 25 _____ 6) 41 to 50 _____
 3) 26 to 30 _____ 7) 51 to 65 _____
 4) 31 to 35 _____

IV. Sex: Male: _____ Female: _____

V. Number of Years Experience: Teacher _____ years

VI. The Year you Received:

a) your teaching cert. Year 19 _____
 b) your B. Ed. Year 19 _____

VII. The Year you Began:

counseling 2/3 time or more Year 19 _____

Ursuline Convent,
10647 - 81 Avenue,
Edmonton, Alberta

March 14, 1968

Dear Teachers and Counsellors:

I am at present completing my thesis for a Master's Degree in Educational Psychology. I am aware of the demands on your time, however, I would be very grateful if you could find ten minutes to complete the enclosed questionnaire, which is to provide data for my thesis.

You will find enclosed a stamped self-addressed envelope.

I thank you in advance for your cooperation and assistance.

Sincerely yours,

Sister Catherine Kroetch

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